

Original Research Article

Profile of HIV sero-positive attendees: an integrated counselling and testing centre record based retrospective study

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ABSTRACT

Background: The sustainable development goal target is to end the AIDS epidemic by 2030. HIV continues to be a major global public health issue, having claimed more than 35 million lives so far. The objectives of the study were to find out the pattern of socio-demographic profile among HIV sero-positive patients attending ICTC centre in SVIMS, Tirupati and to study the risk behaviour pattern among HIV sero-positives.

Methods: Retrospective cross sectional study was undertaken at ICTC Centre, SVIMS, SPMC (W), Tirupati, Andhra Pradesh, India. The records of data of all the HIV sero-positive attendees who attended the ICTC from January 2013 to June 2018 were included as study subjects. Records maintained were noted in proforma containing socio-demographic characteristics of HIV seropositive patients. Data was analysed using SPSS software version 23.00.

Results: Majority of sero-positives were illiterates, married, daily wage labourers from rural area, in 20 to 60 years age group. Transmission was predominantly through the heterosexual route (96.1%). 68(54.4%) males and 63(72.4%) females were sero-concordant while 57 (45.6%) males and 24 (27.6%) females were sero-discordant.

Conclusions: There is need to carry out intense IEC activities for behavior change at grass root levels. Low literacy and limited access to health facilities should be addressed.

Keywords: HIV seropositive, Risk behaviour, ICTC, Andhra Pradesh

INTRODUCTION

Recognised as emerging disease only in early 1980's, AIDS has rapidly established itself throughout the world, and is likely to endure and persist well in to the 21st century. AIDS has evolved from the mysterious illness to the global pandemic which has infected tens of million people.¹

The sustainable development goal target is to end the AIDS epidemic by 2030. UNAIDS has laid the development of global strategy fast track- ending the AIDS epidemic by 2030.² HIV continues to be a major

global public health issue, having claimed more than 35 million lives so far. In 2017, 940 000 people died from HIV-related causes globally. There were approximately 36.9 million people living with HIV at the end of 2017 with 1.8 million people becoming newly infected in 2017 globally.³

As per the India HIV estimation 2015 report (15-49 years) HIV prevalence in India was estimated at 0.26% (0.22%-0.32%) in 2015. In 2015, adult HIV prevalence was estimated at 0.30% among males and 0.22% among females. Undivided Andhra Pradesh and Telangana have the highest estimated number of PLHIV (3.95%) and estimated adult HIV prevalence was (0.66%).⁴ Promising

development have been seen in recent years in global efforts to address the AIDS epidemic, including increased access to effective treatment and prevention programmes. However, the number of people living with HIV continues to grow, as does the number of deaths due to AIDS.¹ The adult HIV prevalence at national level has continued its steady decline from an estimated peak of 0.38% in 2001-03 through 0.34% in 2007 and 0.28% in 2012 to 0.26% in 2015.⁵ The basic service division of the department of AIDS control provides HIV counselling and testing services for HIV infection. The national programme is offering these services since 1997 with the goal to identify as many people living with HIV, as early as possible and linking them appropriately and in timely manner to prevention, care and treatment services.¹ A person is counselled and tested for HIV at ICTC, either of his own free will (client oriented) or as advised by a medical provider (provider initiated). Functions of ICTC include early detection of HIV, provision of basic information on modes of transmission and prevention of HIV/AIDS for promoting behavioural change and reducing vulnerability and linking PLHIV with other HIV prevention, care and treatment services.¹

A study by Dutta et al in Kolkata showed that that a significant number of the positive cases in their study were in economically productive as well as in reproductive age group and majority of patients were males indicating that this disease is causing a great loss to the nation's economy.⁶ Kommula et al found that HIV prevalence of Andhra Pradesh among the ICTC clients showed a gradual decline from 10.4% in 2008 to 6.1% in 2010.⁷

The data generated in ICTC is an important indicator of the prevalence of HIV, and its mode of transmission in the given region. As Andhra Pradesh is one of the high prevalence states, this study is undertaken to study the pattern of socio-demographic profile among HIV seropositive patients at ICTC centre in SVIMS, Tirupati.

Objectives

- To find out the pattern of socio-demographic profile among HIV sero-positive patients attending ICTC centre in SVIMS, Tirupati.
- To study the risk behaviour pattern among HIV seropositives.

METHODS

Study design: Retrospective cross sectional study.

Study setting

The study was undertaken at ICTC Centre, SVIMS, SPMC (W), Tirupati, Andhra Pradesh. ICTC centre at SVIMS, Tirupati is functional since February 2010 conducting HIV tests, after taking informed consent, counsellors of ICTC collect anonymous data of patients

of HIV seropositive in registers and logbooks as per NACO guidelines under strict confidentiality. They provide pre-test and post-test counselling to the ICTC patients. HIV is diagnosed by rapid diagnostic tests as per strategy and policy prescribed by National AIDS control organization. All HIV sero-positive persons will be referred to antiretroviral therapy (ART) centre of Govt. hospital for further management.

Study population

The records of data of all the HIV sero-positive attendees excluding antenatal patients who attended the ICTC from January 2013 to June 2018 were included as study subjects.

Study instrument

Proforma containing socio-demographic characteristics of HIV seropositive patients will include whether patients belong to rural or urban area, age, sex, occupation, their education level, occupation, marital status, high risk behaviour pattern, HIV status of the spouses/partners of the study population, (concordant and discordant couples), referral pattern, to which high risk group they belong and their source of information etc.

Data collection

Records maintained in ICTC was assessed and was noted in sociodemographic proforma.

Statistical analysis

Data was entered in the Microsoft Excel sheet and analysed using SPSS software version 23.00.

Ethical considerations

Since the records include the personal information of the patients like name, address, phone numbers etc, confidentiality of identity was maintained.

Quality control measures

Complete information was obtained from different registers and data was rechecked. Pre- Structured checklist was used. format was used.

RESULTS

A retrospective review of patient records was done from ICTC center at SVIMS hospital, Tirupati, Chittoor district in southern India from January 2013 to June 2018. The data of all seropositive individuals was collected by reviewing the records, compiled, and analysed.

As shown in Table 1, the total number of males tested was 24,160 and females tested were 21,083 at ICTC centre from January 2013 to June 2018.

Table 1: Year wise distribution of individuals.

Year	Total males tested	Male positive	Percentage (%)	Total females tested	Female positive	Percentage (%)	TG	Percentage (%)	Total
2013	4205	89	52.4	3789	78	45.9	03	1.8	170
2014	4465	70	54.3	3685	59	45.7	0	0.0	129
2015	3616	73	62.9	2985	43	37.1	0	0.0	116
2016	4384	64	56.6	4254	49	43.4	0	0.0	113
2017	4954	66	58.4	4430	47	41.6	0	0.0	113
Till June 2018	2536	38	52.1	1940	35	47.9	0	0.0	73
Total	24,160	400	56.0	21,083	311	43.6	03	1.8	714

Out of total 45,243 individuals visited ICTC centre for HIV counselling and testing from January 2013 to June 2018, 714 persons were HIV sero-positives. Prevalence of HIV among male was found to be 56.0% and among females it is 43.6%. Maximum sero-positivity was found among males than females since 2013 to June 2018. Higher sero-positivity in the present study could be due to high prevalence of HIV in state and also majority of population was rural i.e. 75.60% and illiterates. Number of individuals visited the ICTC has decreased in the year 2015 compared to the previous years for both males and females and also increased in the year 2017. About sero-positivity, not much difference was observed, it was 50.1-62.9% among males and among females 37.1%-47.9%. Recently i.e. in year 2018, sero-positivity is more among females (47.9%).

As depicted in Figure 1, 540 (75.6%) individuals were from rural area and 174 (24.4%) were from urban area.

As shown in Figure 2, HIV prevalence was significantly high in 31-40 years (31%) followed by 41-50 years (28.60%). Next affected age group was 51-60 years (17.10%). In present study, the highest age affected was two 80 years old widow women.

Table 2: Socio-demographic characteristics of study population.

Characteristics	Frequency	Percentage (%)
Sex		
Male	400	56.0
Female	311	43.6
Transgender	3	0.4
Level of education		
Illiterate	583	81.7
Primary	41	5.7
Secondary	26	3.6
College & above	64	9.0
Marital status		
Married	527	73.8
Single/unmarried	50	7.0
Divorce/separated	38	5.3
Widow/widower	99	13.9
Occupation		
Daily wage labourer	567	79.4
Job (govt/private)	42	5.9
Business	5	0.7
House wife	24	3.4
Retired	5	0.7
Student	19	2.7
Agricultural	16	2.2
Driver	30	4.2
Others	6	0.8

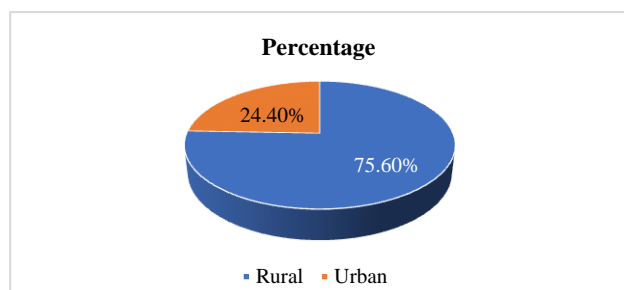


Figure 1: Area-wise distribution of sero-positives.

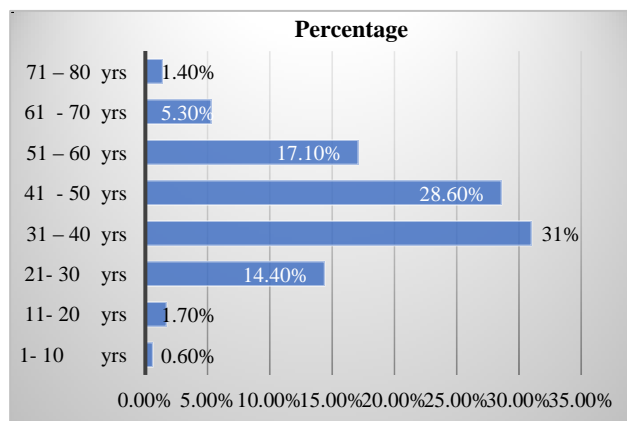


Figure 2: Age wise distribution of study population.

As shown in Table 2, among 714 HIV sero-positives, 400 (56.0%) were males, 311 (43.6%) were females and 3 (0.4%) were transgenders. With respect to literacy in present study, 583 (81.7%) HIV sero-positives were illiterates. Individuals who were graduates or more than

that were i.e. 64 (9.0%) followed by 41 (5.7%) individuals who had primary education and 26 (3.6%) had secondary education.

Maximum sero-positivity was found among daily wage labourers, 567 (79.4%), followed by 42 (5.9%) patients who were educated individuals and had either government or private jobs. In present study, Drivers were 30 (4.2%), 19 (2.7%) were students, 16 (2.2%) were agricultural workers or farmers. In others category, sero-positives were hotel staff and tailors etc. In present study, 3.4% were housewives.

It was found that majority of the sero-positives, 527 (73.8%) were married. In this study, second most affected group was widow/widower, 99 (13.9%). Divorced or separated group affected were 38 (5.3%). Of the study population, 50 (7.0%) individuals were unmarried.

Table 3: Type of individuals.

Type of individual	Frequency	Percent (%)
Self-initiated	74	10.4
Referral initiated	640	89.6
Total	714	100.0

As shown in Table 3, out of total 714 sero-positives, 74 (10.4%) patients attended ICTC voluntarily or they were self-initiated while 640 (89.6%) were referral/provider initiated. These referred cases were referred to ICTC by various clinical departments for either pre-surgical screening or they had some medical problems.

Table 4: Risk behaviour pattern among HIV positive.

Route of transmission	Frequency	Percentage (%)
Hetero sexual	686	96.1
Homosexual	1	0.1
History of blood transfusion	1	0.1
Parent to child	4	0.6
Not specified/unknown	22	3.1
Total	714	100.0

As shown in Table 4, majority of clients were heterosexual. Transmission by homosexual route was 1 (0.1%) in present study. Peri-natal transmission in the present study was found to be 4 (0.6%) over the period of five years. In this region, only one (0.1%) patient gave the history of previous blood transfusion. In this study, 22 (3.1%) individuals did not disclose their risk status. Transmission by intravenous drug abuse was not detected in our study.

As depicted in Figure 3, Out of 527 (73.8%) married individuals, only 212 (29.7%) individuals spouse were tested. Out of 321 married males, spouse tested were 125

(38.94%) and 68 (54.4%) were seropositive and 57 (45.65%) were seronegative.

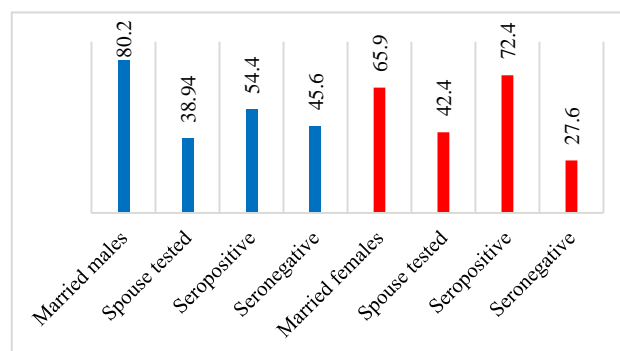


Figure 3: Spousal HIV status.

Among 205 (65.9%) married females, spouse tested were 87 (42.4%), out of which 63 (72.4%) were seropositive and 24 (27.6%) were sero-negative. Spouse positivity was higher among males 72.4% as compared to females i.e. 54.4%. As shown in Figure 3, 68 (54.4%) males and 63 (72.4%) were sero-concordant while 57 (45.6%) males and 24 (27.6%) females were sero-discordant.

Table 5: High risk group.

High risk group	No	Percentage (%)
FSW	25	3.5
Truckers	24	3.4
Migrant	18	2.5
MSM	7	0.9
TG	03	0.4
STD	2	0.3
Multiple	584	81.8

Table 5 depicts, HIV prevalence (%) among the high risk groups through referrals from targeted intervention projects. HIV prevalence among female sex workers recorded was 3.5%. Among men who have sex with men, HIV prevalence recorded was 0.9%. Among truckers, HIV prevalence was 3.4% and among STI/RTI group it was 0.3% while migrants were 18 (2.5%) and 584 (81.8%). Intravenous drug abuse was not recoded in this region.

Table 6: Source of information of seropositive individuals.

Source of information	Frequency	Percentage (%)
Counsellor	15	2.1
Doctors	528	73.9
Friends	2	0.3
Health worker.	41	5.7
Media	69	9.7
Outreach workers	32	4.5
Relatives	27	3.8
Total	714	100.0

As shown in Table 6, Majority of the patients i.e. 528 (73.9%) received information from doctors, followed by media i.e. 69 (9.7%), 41 (5.7%) from health workers and 32 (4.5) from outreach workers and only 27 (3.8%) received information from relatives.

DISCUSSION

HIV incidence is a key parameter that prevention efforts aim to reduce, since newly infected persons contribute to the total number of persons living with HIV; they will progress to disease and death over time; and are potential source of further transmission.²

In present study, the total number of males tested was 24,160 and females tested were 21,083 at ICTC centre from January 2013 to June 2018

Out of total 45,243 clients visited ICTC centre for HIV counselling and testing from January 2013 to June 2018, 714 persons were HIV sero-positives. Prevalence of HIV among male was found to be 56.0% and among females it is 43.6%. Maximum sero-positivity was found among males than females since 2013 to June 2018. Higher sero-positivity in the present study could be due to high prevalence of HIV in state and also majority of population was rural i.e. 75.60% and illiterates. Number of individuals visited the ICTC has decreased in the year 2015 compared to the previous years for both males and females and also increased in the year 2017. About sero-positivity, not much difference was observed, it was 50.1-62.9% among males and among females 37.1% - 47.9%. Recently i.e. in year 2018, sero-positivity is more among females (47.9%) which is because of increased referrals by NGOs. In contrast with this study, a study conducted by Kommula et al reported that, HIV sero-prevalence was found to be declining over the 4 years, except in 2008.⁷ They also observed that in 2008, the no. of clients attended the ICTC has decreased compared to the previous year for both males and females and at the same time the HIV positivity has increased. A study conducted by Ganju et al showed that a total of 19,234 clients were counselled, of which 17,411 were tested and 970 were detected positive for HIV.⁸ The HIV sero-positivity amongst the total tested clients was 5.57%. Also showed that, though only 6,670 females were screened for HIV infection in contrast to 12,56 males, the HIV positivity was higher in females 5.78% (n=386) than in males 4.64% (n=584).⁸ Higher HIV sero-prevalence has been reported by Gupta et al i.e. 9.6% in Udupi.⁹

In present study, majority of sero-positive individuals, 540 (75.6%) were from rural area and 174 (24.4%) were from urban area. Similarly Bhandarkar et al in their study, reported that majority of patients were from rural setting i.e. 233 (83.2%) males and 182 (86.2%) females while Ahuja et al found that Rural to urban ratio was 2.39:1 in their study.^{10,11} Rural poor people are more vulnerable as they do not have easy access to existing services. Also there are different perceptions surrounding

issues on sex and sexuality, drug use and HIV as well as stigma and discrimination towards PLHIV in rural areas which require localised approach. This has further fuelled by inadequate infrastructures, weak health systems and poor connectivity with most of the facilities.¹²

HIV prevalence was significantly highest in 20 to 60 years age group. Other studies also found similar results. Study conducted by Vyas et al, Chougule et al and Langare et al reported higher HIV prevalence in the age group 15-49 years.¹³⁻¹⁵ Among children in age bracket of 1-10 years., 4 (0.6%) were seropositive which was because of mother to child transmission. Other studies reported higher sero-positivity among children like, Chougule et al reported 8.03% children below 14 years were HIV positive while Ganju et al reported 7.5% children <15 years were infected.^{8,14} In this study, seropositive cases were also recorded among elderly (60 – 80 age group) individuals. In contrast with this study, Chougule et al reported low sero-positivity of 9.26% among age group >50 years while Kommula et al reported sero-positivity among age group 50 years and above, 39 (13.9%) among males and 11 (6.6) among females.^{7,14} In present study, the highest age affected were two 80 years old widow women.

Socio-demographic characteristics of study population

With regard to gender, a higher percentage of those tested for HIV were males 24,160 and the rest were females i.e. 21,083. As shown in Table 1, among 714 HIV sero-positives, 400 (56.0%) were males, 311 (43.6%) were females and 3 (0.4%) were transgenders. Similarly study by Niranjana et al, Kommula et al, Ganju et al, Sharma et al reported in their study that HIV sero-positivity was higher in males than females.^{7,8,16,17} On the contrary to this, study carried out by Chougule et al, Chauhan et al, Mathur et al reported that seropositivity was higher among females than males.^{14,18,19} But Bansal et al in Haryana, reported that sero-positivity was equal among male and female.²⁰ With respect to literacy in present study, 583 (81.7%) HIV sero-positives were illiterates. Similarly other studies like Chougule et al and Kommula et al, Dutta et al, Bhandarkar et al observed that majority of clients were illiterates and were on daily wages.^{6,7,10,14}

In present study, individuals who were graduates or more than that were i.e. 64 (9.0%) followed by 41 (5.7%) individuals who had had primary education and 26 (3.6%) had secondary education. Kommula et al found that only 9.6% of males and 6.6% were educated college and above.⁷ But study by Jayarama et al reported that literate people shows high sero-positivity.²¹

Maximum sero-positivity was found among daily wage labourers, 567 (79.4%), followed by 42 (5.9%) patients who were educated individuals and had either government or private jobs. In present study, drivers were 30 (4.2%), 19 (2.7%) were students, 16 (2.2%) were agricultural workers or farmers in others category were

hotel staff and tailors etc. Other studies like Chougale et al and Kommula et al, reported that maximum seropositivity was among agricultural workers.^{7,14} A study by Dutta et al also observed daily wages to be the occupation of majority (70%) of HIV positive clients while Vyas et al.^{6,13} The occupation level and HIV sero-status of the attendees show that among males, majority of seropositives were drivers, agriculture or unskilled workers and businessmen whereas among females, majority were housewives. Bhandarkar et al found that regarding occupation, 129 (45.9%) of males and 76 (36.2%) of females were coolie workers (daily wages) followed by agriculture, housewife, driver and unemployed.¹⁰ People residing in rural areas and working as a daily wage labourers, usually stay away from their families. This might be the reason behind the very high HIV seropositivity rates among daily wage labourers.

In present study, 3.4% were housewives and majority of them were in reproductive age, thus they are the potential for vertical transmission of HIV and cause devastating impacts on families. In the contrast with this study Kommula et al reported 40.7% were housewives in their study.⁷ Newmann et al reported 81% were housewives.²²

In this study, majority of the sero-positives, 527 (73.8%) were married. Similarly Chougale et al, Kommula et al, Vyas et al, Dutta et al found large percentage of HIV sero-positives were married.^{6,7,13,14} In this study, second most affected group was widow/widower, 99 (13.9%). Divorced or separated group affected were 38 (5.3%). Of the study population, 50 (7.0%) individuals were unmarried. More divorcees and widows were observed among HIV positives in a study conducted in Mumbai by Ingole et al.²³

Out of total 714 sero-positives, 74 (10.4%) patients attended ICTC voluntarily or they were self-initiated which is attributed to stigma, fear and ignorance associated with disease while 640 (89.6%) were provider initiated, motivated by doctors. These referred cases were referred to ICTC by different clinical departments for either pre-surgical screening or they had some medical problems. Other than various clinical departments, referrals were from outside government facilities, private practitioners, DOTS Centre, outside ICTC centres, relatives, NGOs like Sneha Sangam (SS), GRASAM, Pehachan, PASS etc. These NGOs works for the cause of high risk groups like migrants, transgenders, FSWs etc.

Similarly Chougale et al, Langare et al, Ganju et al and Mishra et al reported significantly more provider initiated than selfinitiated.^{8,14,15,24} In contrast with this, Kommula et al found that majority 55.1% of clients attended voluntarily and 36% of them were referred by various clinical department while Quazi et al found that, 75% of ICTC attendees were self-referred while the remaining 25% HIV positive clients were referred to ICTC by health care providers.^{7,25}

Risk behaviour pattern among HIV positive

Majority of individuals were heterosexual, (96.1%). This is in concordance with that reported by Vyas et al (81.6%).¹³ Kommula et al reported 83.7% of the individuals, it is acquired through unprotected heterosexual route.⁷ Quazi et al found that 92.6% of male clients undertook risky behaviours associated with heterosexual contacts.²⁵ Ganju et al Based on self-reporting, the heterosexual route of transmission was documented in 77.42% (n=751; m=439, f=312).⁸ Other studies like Chougale et al, Bhandarkar et al, Meenu et al, Ahuja et al reported 87.04%, 78.16%, 83.70%, 78.16% respectively that common mode of HIV transmission was heterosexual route.^{10,11,14,26} Transmission by homosexual route was only 1 (0.1%) in present study which is lower than reported by other studies like Ganju et al reported (0.3%), Ahuja et al reported 14.11% while Kommula et al reported 6 (1.3%) transmission through homosexual behaviour.^{7,8,11}

Peri-natal transmission in the present study was found to be 4 (0.6%) over the period of five years. on the contrary to this, other studies reported higher peri-natal transmission, Vyas et al reported 5.6% to 12.0% over the period of six years.¹³ Joardar et al also reported higher i.e. (2.63%).²⁷ Chougale et al, Kommula et al reported parent to child transmission of HIV 8.02% and 18 (4.0%) respectively.^{7,14} In a study conducted by Ganju et al in a Himachal Pradesh found that Mother to child transmission (perinatal transmission) was recorded in 90.78% over the period of eleven years.⁸

In this region, only one (0.1%) patient gave the history of previous blood transfusion over the period of five and half years which is very much less than as reported by other studies like Vyas et al in their six-year ICTC based study, reported that around 46 patients gave the history of previous blood transfusion over the study period.¹³ Kommula et al reported 5(1.1%) transmission through blood transfusion while Ahuja et al reported 37 (11.71%) sero-positivity through blood transfusion.^{7,11}

In present study it was found that, 22 (3.1%) individuals did not disclose their risk status. Similarly Kommula et al reported 38 (8.6%) of sero-positives did not reveal their risk behaviour.⁷ Mishra et al, a large proportion of study subjects (57.59% males and 88.37% females) did not disclose their risk status.²⁴ Quazi et al reported that a large proportion of study subjects (5.3% males and 51.6% Females) did not disclose their risk status.²⁵ This is likely to be attributed to the fear of discrimination which still prevails in the society for HIV infected individuals.

Transmission by intravenous drug abuse was not found in this study. In a study conducted by Ganju et al in Shimla, Himachal Pradesh found six injection drug users (0.6%).⁸ Kommula et al reported 6 (1.3%) usage of infected syringes and needles.⁷

Spousal HIV status

Out of 527 (73.8%) married individuals, only 212 (29.7%) individuals spouse were tested. Out of 321 married males, spouse tested were 125 (38.94%) and 68 (54.4%) were seropositive and 57 (45.65%) were seronegative. Among 205 (65.9%) married females, spouse tested were 87 (42.4%), out of which 63 (72.4%) were seropositive and 24 (27.6%) were seronegative. Spouse positivity was higher among males 72.4% as compared to females i.e. 54.4%.

In this study, 68 (54.4%) males and 63(72.4%) females were sero-concordant while 57 (45.6%) males and 24 (27.6%) females were sero-discordant. Dutta et al reported in their study conducted in 2017, 10 (43.5%) males and 8 (34.7%) females were sero-concordant while 13 (56.5%) males and 15 (65.3%) were sero-discordant and Chougule et al reported 44.90% were concordant couples, whereas 55.10% were discordant couples.^{6,14}

HIV can affect anyone regardless of sexual orientation, race, ethnicity, gender or age. However, certain groups are at higher risk for HIV and merit special consideration because of particular risk factors. About HIV prevalence (%) among the high risk groups through referrals from targeted intervention projects in this study, among Female sex workers HIV prevalence recorded was 3.5% which is higher than the recorded prevalence at the national level (2.2%) estimated as per national integrated behavioural and biological surveillance.¹² Among men who have sex with men, HIV prevalence recorded was 0.9% which is very much less than the HIV prevalence recorded at the national level i.e. (4.3%).²⁸ In present study, among Truckers, HIV prevalence was 3.4% and among STI/RTI group it was 0.3%. As per records in ICTC, 584 (81.8%) sero positives were in multiple high risk groups.

HIV Sentinel surveillance 2016-17¹² showed that the national HIV prevalence among HRG i.e. the observed HIV prevalence among was 0.51% among single male migrants (SMM), 0.86% among long distance truckers (LDT), 1.56% among FSW, 2.69% among MSM, 3.14% among H/TG and 6.26% (95% CI: 5.92-6.59) among IDUs.

Majority of the seropositive individuals, 528 (73.9%) received information from doctors, followed by media i.e. 69 (9.7%), 41 (5.7%) from health workers and 32 (4.5%) from Outreach workers while 27(3.8%) from relatives.

CONCLUSION

The HIV prevalence was found to be high among rural people who were illiterates, daily wage labourers and high proportion of them were in the younger, economically productive age group. As most effective approaches for the prevention and control of this disease is awareness and life style changes, epidemiology of HIV

should be understood especially with regard to various socio demographic factors. There is need to carry out intense IEC activities for behaviour change at grass root levels. Low literacy and limited access to health facilities should be addressed.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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